

Application No: 09/522,753

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(088802-8704)

REMARKS

The present invention relates to co-repressor polypeptides that are capable of mediating the transcriptional silencing of at least one member of the steroid/thyroid hormone superfamily of receptors. Exemplary members of the silencing mediators of retinoic acid and thyroid hormone receptors (SMRT) family of co-repressors are provided, including full length human SMRT co-repressors, as well as various isoforms of mouse and Drosophila SMRT co-repressors.

By the present communication, claims 5, 14 and 16 have been amended to define Applicants' invention with greater particularity. No new matter is introduced by the subject amendments as the amended claim language is fully supported by the specification and original claims.

In view of the amendments submitted herewith, claims 3-5, 9, 10, 12-14, 16-25 and 38 remain pending in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination, is presented in the Listing of Claims, beginning on page 2 of this communication, with an appropriate status identifier for each claim.

The indication that claims 9, 10, 12, 13, 17 and 38 are allowed is acknowledged with appreciation. The further indication that claims 3 and 20 are objected to as being allowable, but dependent from a rejected base claim, is also acknowledged with appreciation. In view of the following discussion, it is submitted that the claims from which claims 3 and 20 depend are in condition for allowance, thus they have not been re-written in independent form at this time.

Priority

Applicants respectfully disagree with the Examiner's assertion that Applicant has allegedly "not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C 120" (see page 2, lines 12-13 of the Office Action).

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As acknowledged by the Examiner, "[t]he later-filed application must be an application for a patent for an invention which is also disclosed in the prior application (the parent or original nonprovisional application or provisional application); the disclosure of the invention in the parent application and in the later-filed application must be sufficient to comply with the requirements of the first paragraph of 35 U.S.C. 112." (See page 2, lines 14-18 of the Office Action). The prior application (now U.S. Patent No. 6,489,441; based on USSN 08/522,726) discloses co-suppressors of steroid/thyroid hormone receptor activity having defined amino acid residues, or conservative variations thereof. The present application properly claims priority from the parent application because the human SMRT sequence information disclosed herein represents an extended form of the sequence information disclosed in the parent application. The sequence information disclosed herein includes the same SMRT sequence information as disclosed in the parent application, plus newly discovered SMRT sequence information. It is the SMRT sequence information disclosed in the parent application, and disclosed and claimed in the present application that is entitled to the priority date of the parent application.

The present CIP application describes an extended isoform of SMRT. Therefore, the claim of priority to USSN 08/522,726 for SMRT sequence originally disclosed in the parent application, and also disclosed in the present application, is submitted to be proper.

Rejections under 35 U.S.C. §102

The rejection of claims 4, 19 and 21-22 under 35 U.S.C. §102(b) as allegedly being anticipated by Chen et al. (Nature, October 1995, vol. 377(6548), pp. 454-457), is respectfully traversed. As discussed above, Applicants are entitled to a priority date of September 1, 1995, for at least the portion of SEQ ID NO:5 that is disclosed in the parent application (see SEQ ID NO:1). The parent application, USSN 08/522,726, was based on the Chen publication (which discloses the human SMRT sequence disclosed and claimed in the parent application). Therefore, the Chen publication has a later effective date than the priority date to which the present claims are entitled, and is, therefore, not properly applied against the present claims.

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Accordingly, reconsideration and withdrawal of this rejection of claims 4, 19 and 21-22 under 35 U.S.C. §102(b) are respectfully requested.

The rejection of claims 4, 19 and 21-22 under 35 U.S.C. §102(a) as allegedly being anticipated by Ordentlich et al. (PNAS USA, 16 March 1999, vol. 96(6), pp. 2639-2644), is respectfully traversed. Ordentlich, the publication on which the present CIP application is based, describes an extended isoform of SMRT, relative to the SMRT co-repressor described in the parent application. The present application was filed by inventors Evans, Chen, Ordentlich and Downes, however, Chen is not an inventor of the extended form of SMRT. The Ordentlich paper names Ordentlich, Downes, Evans, Xie, Genin and Spinner as co-authors. As indicated in the Katz declaration provided herewith, of the authors on the Ordentlich paper, only Evans, Ordentlich and Downes made an inventive contribution to the present claims, while the remaining authors (i.e., Xie, Genin and Spinner) made no inventive contribution. Thus, the Ordentlich paper is not the work of another.

Since the present application was filed within one (1) year of the Ordentlich publication (and this publication does not represent the work of another), the reference is not applicable against the present claims. Accordingly, reconsideration and withdrawal of this rejection of claims 4, 19 and 21-22 under 35 U.S.C. §102(a) are respectfully requested.

The rejection of claims 4, 19 and 21-22 under 35 U.S.C. §102(a) as allegedly being anticipated by Park et al. (PNAS USA, 30 March 1999, vol. 96(7), pp. 3519-3524), is respectfully traversed. Park et al. merely published similar findings to those reported by Ordentlich, only two (2) weeks later. Based on the earlier publication by Ordentlich of the claimed extended isoform of SMRT, Applicants were clearly in possession of the present invention before the effective date of the Park publication. Since the present application was filed within one (1) year of the Park publication, and the fact that Applicants were clearly in

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possession of the present invention before the effective date of the Park publication, the reference is not applicable against the present claims.

Accordingly, reconsideration and withdrawal of this rejection of claims 4, 19 and 21-22 under 35 U.S.C. §102(a) are respectfully requested.

Rejections under 35 U.S.C. §112, first paragraph—Written description

The rejection of claims 5 and 18 under 35 U.S.C. §112, first paragraph as allegedly failing to comply with the written description requirement, is respectfully traversed. Applicants respectfully disagree with the Examiner's assertion that the claims allegedly contain "subject matter that was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention." (See page 5, lines 4-7 of the Office Action). While the claims are submitted to be clear as written, in order to reduce the issues and expedite prosecution, the "wherein" clause asserted by the Examiner to be problematic has been amended to read simply "wherein said polynucleotide has at least 80% sequence identity with SEQ ID NO:4," thereby making it abundantly clear that 80% identity to SEQ ID NO:4 is merely further description of the claimed polynucleotide.

The rejection of claims 23-25 under 35 U.S.C. §112, first paragraph as allegedly failing to comply with the written description requirement, is respectfully traversed. Applicants respectfully disagree with the Examiner's assertion that the claims allegedly contain "subject matter that was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention." (See page 6, lines 2-4 of the Office Action).

As acknowledged by the Examiner, "[t]he term 'suitable stringency conditions' is used in the context of an identified oligonucleotide comprising at least 15 nucleotides that hybridizes to a

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polynucleotide of claim 4, but not to a polynucleotide encoding SEQ ID NO:11 or to a polynucleotide encoding an amino acid sequence consisting of amino acids 1031 to 2517 of SEQ ID NO:5." (See page 6, lines 8-12 of the Office Action.) It is respectfully submitted that, given the fact that hybridization is a widely used technique, taken together with the context provided by the present claims (i.e., the comparative sequence information which clearly identifies those polynucleotides which fall within the scope of the present claim and those which are outside the scope of the present claim), one of skill in the art could readily identify "suitable" hybridization conditions to accomplish the desired goal.

Accordingly, reconsideration and withdrawal of the rejections of claims 5, 18 and 23-25 under 35 U.S.C. §112, first paragraph, are respectfully requested.

35 U.S.C. §112, second paragraph

The rejection of claims 5, 14, 16, 18 and 23-25 under 35 U.S.C. §112, second paragraph as allegedly being indefinite, is respectfully traversed. Specifically with respect to claim 5, Applicants respectfully disagree with the Examiner's assertion that the claim is allegedly vague and indefinite. In order to reduce the issues and expedite prosecution, the phrase at issue has been amended to read "wherein said polynucleotide has at least 80% sequence identity with SEQ ID NO:4," thereby making it abundantly clear that 80% identity to SEQ ID NO:4 is merely further description of the claimed polynucleotide.

With respect to claims 14 (and 16), these claims have each been amended to make it clear that the claimed polynucleotide embraces both the coding sequence (first nucleotide) and complement thereto (second nucleotide). Thus, the nucleotide of part (d) of the claim would not be required to encode a SMRT co-repressor.

With respect to claims 23 (and 25), Applicants respectfully disagree with the Examiner's assertion that these claims are allegedly "vague and indefinite in that the metes and bounds of the

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phrase 'suitable stringency conditions' are unclear." (See page 8, lines 9-10 of the Office Action). As discussed above, one of skill in the art, given the fact that hybridization is a widely used technique, taken together with the context provided by the present claims (i.e., the comparative sequence information which clearly identifies those polynucleotides which fall within the scope of the present claim and those which are outside the scope of the present claim), one of skill in the art could readily identify "suitable" hybridization conditions to accomplish the desired goal.

Accordingly, reconsideration and withdrawal of this rejection of claims 5, 14, 16, 18 and 23-25 under 35 U.S.C. §112, second paragraph, are respectfully requested.

CONCLUSION

In view of the above amendments remarks, it is respectfully submitted that the present application is now in condition for allowance. Accordingly, reconsideration and favorable action on all claims are respectfully requested. In the event any matters remain to be resolved in view of this communication, the Examiner is encouraged to call the undersigned so that a prompt disposition of this application can be achieved.

Respectfully submitted,

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Enclosure—Katz Declaration

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